



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,999	09/27/2001	Horst Berneth	MO-6633/LEA 33,661	8752
157	7590	03/29/2005	EXAMINER	
BAYER MATERIAL SCIENCE LLC 100 BAYER ROAD PITTSBURGH, PA 15205			ANGEBRANNDT, MARTIN J	
			ART UNIT	PAPER NUMBER
			1756	
DATE MAILED: 03/29/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/937,999

Applicant(s)

BERNETH ET AL.

Examiner

Martin J Angebranndt

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/19/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6,11,13,14 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6,11,13,14 and 19-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1756

1. The response by the applicant has been read and given careful consideration. Responses to the argument of the applicant are presented after the first rejection to which they are directed. Rejections of the previous office action not repeated below are withdrawn based amendments to the claims or the terminal disclaimer. The applicant does have a basis for the language values of x and y in claim 10 as originally filed, which appears in the remarks of 9/27/2001 with the notations showing the changes in the preliminary amendment. Therefore, the language was present in the 371 filing.

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-3,6,11 and 13-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

R⁵, R⁶, R⁷, R⁸, R⁹ and R¹⁰ are undefined in claim 1.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3,5,6,10,11,14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

It would have been obvious to one skill in the art to modify the co-polymer of formula 8 by either adding the second monomer shown in formula 7 or replacing the second monomer of formula 8 with the second monomer shown in formula 7 with a reasonable expectation of forming a useful optical recording medium based upon equivalent function. This combination anticipates the co-polymer of formula XVIII shown in claim 1.

The applicant argues that the combination is not shown and that motivation is not provided. The examiner notes that the monomers involved in the modification are disclosed as functionally equivalent and used alternatively on page 5 at lines 5-20 and are both embraced by the formula XI found on page 5 of the reference. This functional equivalence is congruent with the doctrine of equivalence routinely applied in patent prosecution and is particularly relevant when the net effect is the substitution of oxygen for N-methyl as taught by formula XI in the reference applied. The references to the particular monomers has been deleted to reduce the confusion. The applicant argues that terpolymers are not embraced by the scope of coverage sought. This is incorrect as while the ration of x:y is recited, the percentages are not and comprising language is used. Therefore the claims do not exclude copolymers containing more than two monomers. The disclosure of equivalence clearly links the monomers held by the examiner as functionally equivalent and based upon the teachings of formula XI in the reference, this would have been appreciated by one of ordinary skill in the art. The functional equivalence establishes a reasonable expectation of success and provides motivation.

4. Claims 1-3,6,11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bieringer et al. '846, in view of Berneth et al. DE 19703132 and Savant et al. '221.

Bieringer et al. '846 teach the use of copolymers of I and II as shown in column 2. The preferred monomers of II are disclosed with respect to formula VIII. The examiner notes that this overlaps with formula IX (col. 7) where $X^{3'}$ is O, J is zero, and T^2 is $(CH_2)_n$ and S^2 is the same as those disclosed in column 2 of the reference. (see also the general formula VIII), the use of acrylate monomers in the co-polymer is also disclosed (8/10). The ratio of the groups is disclosed (7/38-47) as is the MW (8/35-38). The use of these in optical recording and holography is disclosed (10/29-61).

Berneth et al. DE 19703132 disclose the copolymers on pages 10-15. These are evaluated on the basis of their absorption maxima when coated 0.9 microns thick on a glass substrate and written upon using an argon ion laser at a laser power of 250 mW (9/5-9). See dye monomer on 14/5 (upper dye of formula 8 and the same as that used in XIX of instant specification on page 20), dye monomer at 14/20 (lower monomer of formula 8, and similar to that used in dye XIX of instant specification on page 21.) and dye monomer at 13/30, lower monomer in formula 7 and identical to that at 11/8 used in dye XIX of instant specification on page 21.) The use of the (meth)acryl monomer is also disclosed as XVI on page 6.

Savant et al. '221 in example V describe the azo dyes bound to a polyethylene vinyl alcohol backbone and coated to a thickness of 10 microns. Examples XIII to XX describe thicknesses of 10 to 150 microns (0.1 to 0.15 mm) with dye loading concentrations of 10% as the best (23/53-55). The storage of multiple holograms in the same spot by controlling the angle

between the incident (object) and reference beams is disclosed. (25/46-57 and 7/11-15). Suitable polymers are disclosed in columns 8-10. Useful azo dyes are disclosed in columns 9-17. The formation of thicknesses of 10-1000 microns by spin coating is disclosed. (18/51-66). The lowest layer in figure 3 is a reflective layer.

It would have been obvious to one skilled in the art to modify the examples of Bieringer et al. '846 by using similar azo dyes, such as those disclosed by Berneth et al. DE 19703132 with a reasonable expectation of the medium functioning based upon the disclosures of the two media recording based upon anisotropy and further it would have been obvious to modify the result by coating the film thicker and adding a reflective film as taught by Savant et al. '221 to allow the reading of data by reflection as shown in figure 3 and increase the sensitivity if the medium due to the increased absorption due to the increased thickness as described in Beer's law.

The examiner notes the addition of Bieringer et al. '846 to address the issues raised by the amendment and holds that there is a reasonable expectation of success in the exchange of monomers based upon the same mode of operation being described in the applied prior art.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

Art Unit: 1756

provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-3,6,11,13,14 and 19-21 are provisionally rejected under the judicially created doctrine of double patenting over claims 1-26 of copending Application No. 10/296684. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: The claims of the co-pending application include claims describing the use of the co-polymers in optical recording media as well as embracing the polymers of formulae XIV which are within CV (claim 10) and similar to those specifically exemplified in claim 11. The side groups are recited in claims 13 and 14 and claim 1 describes the (meth)acrylate monomer. The thickness of more than 0.1 mm is recited in claim 22.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

5. Claims 1-3,6,11,13,14 and 19-21 are provisionally rejected under the judicially created doctrine of double patenting over claims 1-26 of copending Application No. 10/296683. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: The claims of the co-pending application include claims describing the use of the co-polymers in optical recording media as well as embracing the polymers of formulae XIV which are within CV (claim 10) and similar to those specifically exemplified in claim 11. The side groups are recited in claims 13 and 14 and claim 1 describes the (meth)acrylate monomer. The thickness of more than 0.1 mm is recited in claim 22.

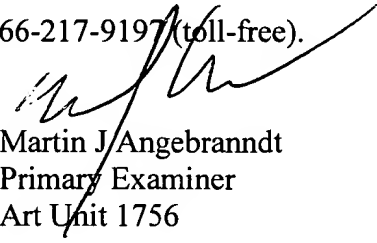
Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

9 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1756

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Martin J. Angebrannndt
Primary Examiner
Art Unit 1756

08/26/2004